

REMARKS/ARGUMENTS

This Amendment is responsive to the Notice of Allowance as received in an email on 4/29/2008. The Examiner is thanked for the Notice of Allowance. Claims 1-16 were amended by Examiner's Amendment. Claims 17-32 were canceled by Examiner's Amendment. Claims 1-16 remain pending and were allowed.

In this Amendment pursuant to 37 CFR 1.312, claims 1, 5-7, 9, and 13-15 have been amended to correct an inadvertently introduced typographical error. The claims have been amended as follows:

1. A computer-implemented method for estimating the hidden demand for a perishable consumer item at an outlet at an occurrence of a sellout for use with a demand forecast tree having at least one node with a time series of sales values associated therewith representing the actual sales of the perishable consumer item at the outlet over an observation period, the observation period containing at least one occurrence of a sellout, the method comprising:

determining a subset of sales values of the time series of actual sales values over the observation period for the perishable consumer item at the outlet, the subset of sales values excluding the actual sales value(s) at the at least one occurrence of a sellout, the occurrence of the sellout being determined by comparing a sales value of the time series of sales values against a corresponding draw quantity of a time series of draw quantities;

applying a statistical seasonal causal time series forecasting model of count data on the subset of sales values to determine a forecasted mean demand value for the perishable consumer item at the outlet at the occurrence of the sellout; ~~and~~

estimating the hidden demand at the occurrence of the sellout using a single parameter probability distribution conditioned on the forecasted mean demand value;

wherein the forecasted mean demand value is calculated from the subset of actual sales values excluding the actual sales value(s) at the at least one occurrence of the sellout; ~~and~~

wherein the single parameter probability distribution is conditioned on the forecasted mean demand value; and

whereby the hidden demand for the item is estimated using the formula

$$H = \lambda \left(1 + \frac{f(D)}{1 - F(D)} \right) - D$$

where the parameter λ is the forecasted mean demand value, H is the hidden demand, $f(\cdot)$ is the single parameter probability distribution function, and $F(\cdot)$ is the cumulative distribution function of the single parameter probability distribution, and D is the draw of the perishable consumer item leading up to the occurrence of the sellout.

(Applicant's claim 1, as amended)

5. The method according to claim 4 wherein the step of calculating ~~the~~ the value of at least one performance metric includes calculating the total stockout for the perishable consumer item at the outlet over the evaluation period for evaluating the efficacy of a distribution policy for the perishable consumer item at the outlet over the evaluation period.

(Applicant's claim 5, as amended)

6. The method according to claim 4 wherein the step of calculating the value of at least one performance metric includes calculating ~~the~~ the value of at least one performance metric relating to the sale of the perishable consumer item at the outlet which could be expected to occur over the evaluation period by virtue of the perishable consumer item being delivered in accordance with a recommended distribution policy as opposed to an actual distribution policy for comparing the efficacy of the recommended distribution policy to the efficacy of the actual distribution policy over the evaluation period.

(Applicant's claim 6, as amended)

7. The method according to claim 6 wherein the step of calculating the value of at least one performance metric includes calculating ~~the~~ the value of at least one performance metric from the following list of performance metrics: change in sales, change in returns, change in number of sellouts, and change in stockout.

(Applicant's claim 7, as amended)

9. A computer-implemented system for estimating the hidden demand for a perishable consumer item at an outlet at an occurrence of a sellout for use with a demand forecast tree having at least one node with a time series of sales values associated therewith representing the actual sales of the perishable consumer item at the outlet over an observation period, the observation period containing at least one occurrence of a sellout, the system comprising:

a database server for storing time series of sales values over an observation period;

a forecast engine server for computing demand forecast information for the demand forecast tree;

and

a processor for performing the steps of:

determining a subset of sales values of the time series of actual sales values over the observation period for the perishable consumer item at the outlet, the new subset of sales values excluding the actual sales value(s) at the at least one occurrence of a sellout, the occurrence of the sellout being determined by comparing a sales value of the time series of sales values against a corresponding draw quantity of a time series of draw quantities;

applying a statistical seasonal causal time series forecasting model of count data on the subset of sales values to determine a forecasted mean demand value for the perishable consumer item at the outlet at the occurrence of the sellout; ~~and~~

estimating the hidden demand at the occurrence of the sellout using a single parameter probability distribution conditioned on the forecasted mean demand value;

wherein the forecasted mean demand value is calculated from the subset of actual sales values excluding the actual sales value(s) at the at least one occurrence of the sellout; ~~and~~

wherein the single parameter probability distribution is conditioned on the forecasted mean demand value; and

whereby the hidden demand for the item is estimated using the formula

$$H = \lambda \left(1 + \frac{f(D)}{1 - F(D)} \right) - D$$

where the parameter λ is the forecasted mean demand value, H is the hidden demand, $f(\cdot)$ is the single parameter probability distribution function, and $F(\cdot)$ is the cumulative distribution function of the single parameter probability distribution, and D is the draw of the perishable consumer item leading up to the occurrence of the sellout.

(Applicant's claim 9, as amended)

13. The system according to claim 12 wherein the step of calculating ~~the~~ the value of at least one performance metric includes calculating the total stockout for the perishable consumer item at the outlet over the evaluation period for evaluating the efficacy of a distribution policy for the perishable consumer item at the outlet over the evaluation period.

(Applicant's claim 13, as amended)

14. The system according to claim 12 wherein the step of calculating ~~the~~ the value of at least one performance metric includes calculating the value of at least one performance metric relating to the sale of the perishable consumer item at the outlet which could be expected to occur over the evaluation period by virtue of the perishable consumer item being delivered to the outlet in accordance with a recommended distribution policy as opposed to an actual distribution policy for comparing the efficacy of

the recommended distribution policy to the efficacy of the actual distribution policy over the evaluation period.

(Applicant's claim 14, as amended)

15. The system according to claim 13 wherein the step of calculating ~~the~~ the value of at least one performance metric includes calculating the value of at least one performance metric from the following list of performance metrics: change in sales, change in returns, change in number of sellouts, and change in stockout.

(Applicant's claim 15, as amended)

Applicant submits that no new subject matter has been introduced by the amendment.

Reasons for Allowance

In the Notice of Allowance, in the statement of reasons for allowance the Examiner indicated that claims 1-16 are allowable because the prior art does not teach limitations taken from claim 1. Applicant asserts that the independent claims are independently allowable for the limitations recited by the claims.

CONCLUSION

Entry of this amendment is respectfully urged since it merely cures a formal defect in one of the claims and does not touch the merits.

Respectfully submitted,

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